

What is claimed is:

Sub 17
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1. A method for selecting a group leader among servers in a multicast network segment comprising the steps of:

configuring a set of said servers to participate in electing a leader, each said server having a corresponding voting priority;
determining when a new leader is needed; and
electing one server of said set to become said new leader.

10 2. The method of claim 1 in which said step of configuring a set of servers further comprises the steps of:

measuring a set of leader selection parameters in each participant in said set; and
calculating the corresponding voting priority according to said measurements.

15 3. The method of claim 1 in which said step of determining when a new leader is needed further comprises the steps of:

configuring each server that is not currently the group leader to listen for periodic messages from said group leader;

20 adapting each server to send said periodic messages only if said server is currently the group leader;

waiting a configurable period after no periodic messages are heard; and
multicasting said voting priority to each participant.

25 4. The method of claim 3 in which said periodic messages are multicast on a predetermined network channel comprised of an IP multicast address and a port number.

5. The method of claim 3 in which said multicasting is addressed to a preconfigured IP multicast IP address and port combination for each server of said set of participating servers.

6. The method of claim 1 in which said step of electing further comprises the steps of:
sending a claim of leadership containing a sent voting priority;
listening for other servers to claim leadership;
5 comparing a received priority in any other claims to leadership with said sent
voting priority; and
determining said new leader according to the server having claimed leadership
with the highest voting priority.

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